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中国西藏合叶苔属(合叶苔科)一新种——片毛合叶苔

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Scapania macroparaphyllia, a new species of *Scapania* (Scapaniaceae) from Xizang, China

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Abstract A new liverwort species, *Scapania macroparaphyllia* T. Cao, C. Gao & J. Sun, is described from Xizang (Tibet), China. The new species is closely related to *S. bolanderi* Aust. in the leaves bipartite to the base, leaf keels extremely short, leaf cells strongly thickened at the corners, pseudoparaphyllia present in leaf axils, but differs by the plant small, pseudoparaphyllia large, long lamellate, leaf lobes margin irregularly long toothed, teeth usually consisting of 1 – 3 cells arranged in a single row, cuticle of leaves rough, densely papillose, the papillae large, 6 – 7 μm in diameter.

Key words *Scapania*, *Scapania macroparaphyllia* T. Cao, C. Gao & J. Sun, Scapaniaceae, new species, Xizang, China.

摘要 描述了采自中国西藏的苔类植物新种片毛合叶苔 *Scapania macroparaphyllia* T. Cao, C. Gao & J. Sun。新种与腋毛合叶苔 *S. bolanderi* Aust. 相近,区别特征为:植物体小,叶腋内假鳞毛状附属物大,呈长片状;叶缘齿细胞单列,通常 1 – 3 个细胞长;叶表面角质层粗糙,具圆密疣,疣大,直径达 6 – 7 μm。

关键词 合叶苔属;片毛合叶苔;合叶苔科;新种;西藏;中国

合叶苔属 *Scapania* (Dumort.) Dumort. 是苔类植物合叶苔科 Scapaniaceae 最大的一个属,包括的种类较多。据 Mueller (1905)的世界性专著和 Long (1990)的苔类索引,该属全世界有 230 余个合法名称,现确认有 110 余种(Potemkin, 1998),主要分布在温带或热带高山地区。我国文献记录有 48 种 (黎兴江,1985;Piippo,1990;吴鹏程,2000;高谦,曹同,2000;Potemkin, 2000)。作者在研究本属的过程中,从我国西藏发现了合叶苔属的一个新种,现将其报道如下。

片毛合叶苔 新种 图 1

Scapania macroparaphyllia T. Cao, C. Gao & J. Sun, sp. nov. Fig. 1

Species nova affinis *S. bolanderi* Aust., sed a qua differt planta parva, pseudoparaphylliis

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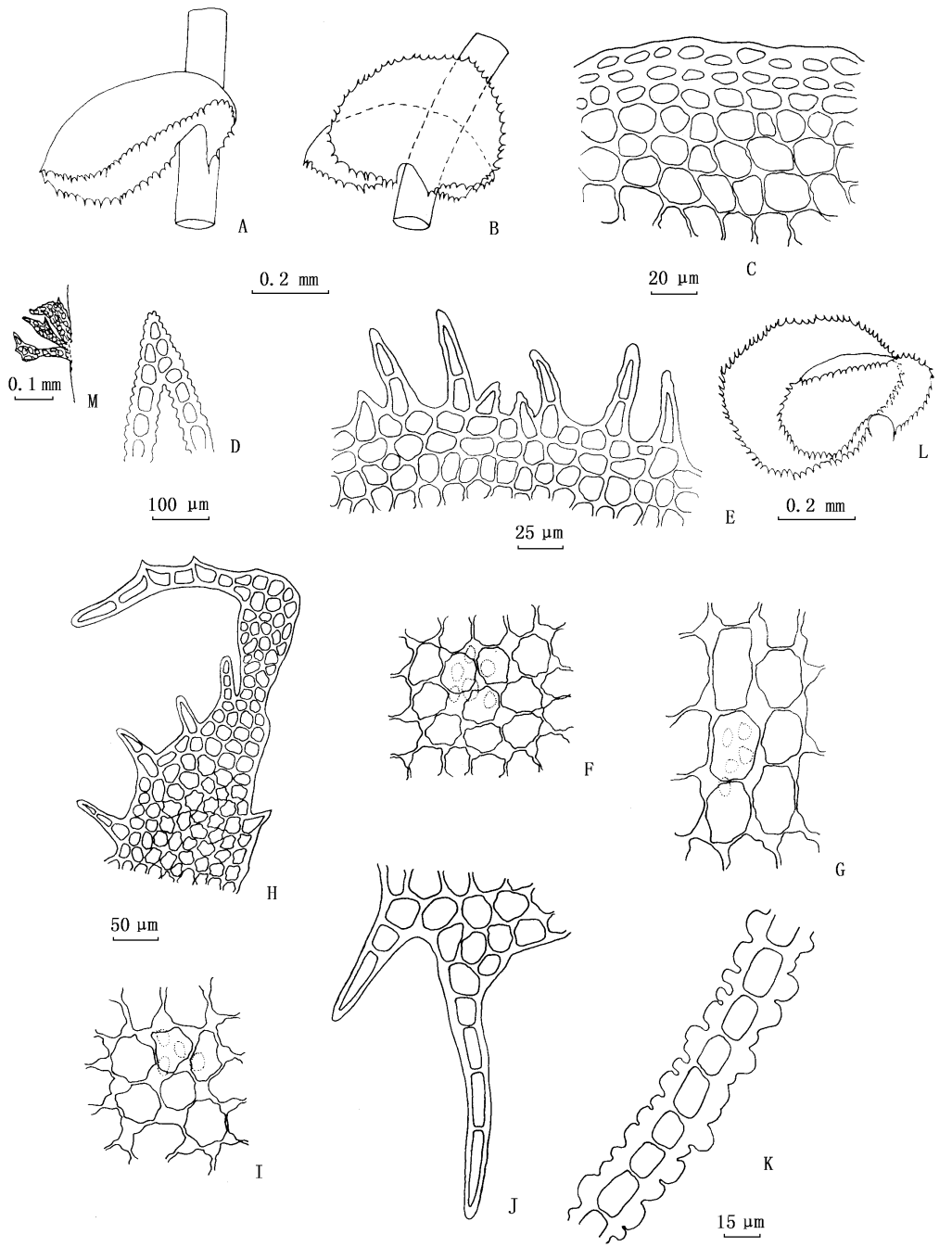

图 1　片毛合叶苔　A，叶着生茎上的形式，腹面观；B，叶着生茎上的形式，背面观；C，茎横切面的一部分；D，叶片脊部的横切面；E，叶边缘细胞及齿突；F，叶上部细胞；G，叶下部细胞；H，假鳞毛状附属物；I，叶中部细胞；J，腹瓣基部边缘齿突；K，叶横切面的一部分；L，叶，示腹瓣与背瓣；M，生于叶腋的假鳞毛状附属物。(曹同、孙军根据陈书坤 442(a)号标本绘)。

Fig. 1.　*Scapania macroparaphyllia* T. Cao, C. Gao & J. Sun.　A, leaf on the stem, ventral view; B, leaf on the stem, dorsal view; C, part of the cross section of stem; D, part of the cross section of leaf keel; E, marginal leaf cells and teeth; F, upper leaf cells; G, basal leaf cells; H, pseudoparaphyllium; I, middle leaf cells; J, teeth at base of the ventral lobe of leaf; K, part of the cross section of leaf; L, leaf showing ventral and dorsal lobes; M, pseudoparaphyllia in leaf axils. Drawn by T. Cao and J. Sun from the type gathering S. K. Chen 442 (a).

magnis, longe lamellaribus, foliis margine irregulariter longeque dentatis, dentibus saepe uniseriatim 1 – 3-cellularibus, foliorum cuticula aspera, conspicue denseque papillosa, papillis magnis 6 – 7 μm diam.

Planta parva, rigidula, flavo-viridis. Caulis 1 – 2 cm longus; cellulae corticales sclerenchymatae parvae 3 – 4-stratae, medullosae parenchymatae magnae. Folia carinis brevissimis instructa, margine irregulariter longeque dentata, dentibus uniseriatim 1 – 3-cellularibu sed eis basalibus ciliatis et 4 – 6-cellularibus, ad basim bipartita, lobis ventralibus subtransversaliter insertis, valde concavis, orbiculari-ovatis, basi paullo decurrentibus, lobis dorsalibus magnitudine circ. 4/5 loborum ventralium aequantibus, subreniformibus, valde concavis, basi paullo decurrentibus; cellulae angulis valde incrassatis instructae, eae mediae et superae subquadratae, submarginales 12 – 18 μm diam., mediae 16 – 22 μm diam., basales oblongae, 18 × 25 μm; cuticula aspera, conspicue denseque papillosa, papillis magnis, ad 6 – 7 μm diam. Pseudoparaphyllia in axillis foliorum inserta, longe lamellaria, margine spiniformi-dentata, latitude 4 – 8-cellularia; cellulae trigonis instructae, angulis incrassatis. Reliqua desunt.

China. Xizang (西藏): Vicinity of Shejila Radar Station, on soil under bush of *Rhododendron*, alt. 5070 m, 1975-08-04, S. K. Chen (**陈书坤**) 423 (a) (KUN accession No. 17745) (holotype, here designated, KUN; isotype, IFSBH).

植物体较小,硬挺,黄绿色,茎长 1 – 2 cm。**茎横切面由皮部** 3 – 4 **层小形厚壁细胞及中部大形薄壁细胞组成。叶两裂至基部,脊部极短。腹瓣近于横生,强烈内凹,圆卵形,基部略下延;背瓣约为腹瓣大小的** 4/5,**近肾形,强烈内凹,基部略下延;裂瓣边缘具不规则长齿,齿具** 1 – 3 **个单列细胞,近基部齿呈纤毛状,长** 4 – 6 **个细胞。叶片细胞角隅强烈加厚,中上部细胞近方形,近边缘细胞直径** 12 – 18 μm,**中部细胞直径** 16 – 22 μm,**基部细胞长方形,**18 × 25 μm。**叶表面角质层具明显密疣,疣大,直径** 6 – 7 μm。**叶腋内具假鳞毛状附属物,假鳞毛呈长片状,宽** 4 – 8 **个细胞,边缘具刺状齿突,细胞角隅加厚,具三角体。其余特征不详。**

片毛合叶苔与腋毛合叶苔 *S. bolanderi* Aust. **相近,两种植物的叶均两裂至基部,脊部极短;叶细胞角隅强烈加厚;叶腋内具假鳞毛状附属物。但片毛合叶苔植物体小,叶腋内假鳞毛状附属物大,呈长片状;叶裂瓣边缘具不规则长齿,齿通常具** 1 – 3 **个单列细胞;叶表面角质层粗糙,具圆密疣,疣大,直径** 6 – 7 μm,**二者易于区别。**

参 考 文 献

Gao C (**高谦**), Cao T (**曹同**) eds. 2000. Bryophyta: Hepaticae, Anthocerotae. In: Flora Yunnanica (**云南植物志**). Beijing: Science Press. 17: 1 – 650.

Li X-J (**黎兴江**) ed. 1985. Bryoflora of Xizang (**西藏苔藓植物志**). Beijing: Science Press. 1 – 581.

Long D. 1990. *Scapania*. In: Geissler P, Bischler H eds. Index Hepaticarum. Geneve: Conservatoire et Jardin Botanique. 6: 145 – 191.

Mueller K. 1905. Monographie der Lebermoosgattung *Scapania* Dum. Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae Naturae Curiosorum 83: 1 – 312.

Piippo S. 1990. Annotated catalogue of Chinese Hepaticae and Anthoceratae. Journal of the Hattori Botanical Laboratory 68: 1 – 192.

Potemkin A D. 1998. On the origin, evolution and classification of the genus *Scapania* (Dum.) Dum. (Hepaticae). Journal of the Hattori Botanical Laboratory 85: 33 – 61.

Potemkin A D. 2000. Bryophyte flora of Hunan Province, China. 2. *Scapania koponenii* sp. nov. (Scapaniaceae, Hepaticae). Annales Botanici Fennici 37: 41 – 44.

Wu P-C (**吴鹏程**) ed. 2000. Bryoflora of Hengduan Mts. (**横断山苔藓志**). Beijing: Science Press. 1 – 741.